

AMENDMENT TO CLAIMS:

65. (currently amended) A composite wall structure for a vascular tubular member for repair of injury to a blood vessel within the body, said composite wall structure comprising;

A. flexible stands and structural strands, said flexible strands having a different physical stiffness than said structural strands, said flexible strands having axial compency interwoven in an alternating manner over and under consecutive flexible strands having circumferential compency, said composite wall structure flexible strands providing for sealing at crossover points,

B. circumferential structural strands having circumferential compency extending substantially in a circumferential direction and which are interwoven by said flexible strands wherein any one of said flexible strands having circumferential compency is replaced by one of said circumferential structural strands, said circumferential structural strands providing for anti-kinking characteristics ~~and other functional characteristics~~ for said vascular tubular member and said circumferential structural strands being exposed an equal portion to both the inside and outside of the tubular member, said circumferential structural and said flexible strands having substantially continuous contact with neighboring strands such that said composite wall structure will not significantly leak blood serum or blood cellular elements,

C. ~~said composite wall structure adapted to allow axial structural strands to extend with axially compency and be interwoven with said circumferential structural strands and said flexible strands, wherein said composite wall structure will not leak blood cellular elements.~~

66. (currently amended) A composite wall structure for a vascular tubular member for repair of injury to a blood vessel within the body, said composite wall structure comprising;

A. first strands and second strands, said first strands being more flexible than said second strands, said first flexible strands having axial compency interwoven in an alternating manner over and under consecutive flexible first strands having circumferential compency, said composite wall structure first strands providing for sealing at crossover points,

B. circumferential structural second strands having significant circumferential compency interwoven by said flexible first strands wherein any one of said flexible first strands having circumferential compency is replaced by one of said circumferential structural second strands, said circumferential structural second strands providing an expansion force to hold the tubular member outwards and providing anti-kinking characteristics and other functional characteristics for said vascular tubular member, said circumferential structural strands and said flexible first and second strands having substantially continuous contact with neighboring strands such that said composite wall structure will not significantly leak blood serum or blood cellular elements.

67. (currently amended) A composite wall structure for a vascular tubular member for repair of injury to a blood vessel within the body, said vascular tubular member being deliverable with a smaller diameter to the blood vessel and expandable to a larger diameter within the blood vessel, said composite wall structure comprising;

A. first strands and second strands, said first strands being more flexible than said second strands, said first flexible strands having axial compency interwoven in an alternating manner over and under consecutive flexible first strands having

circumferential compency, said composite wall structure first strands providing for sealing at crossover points,

B. circumferential structural second strands having a generally circumferential direction interwoven by said flexible first strands wherein any one of said flexible first strands having circumferential compency is replaced by one of said circumferential structural second strands, said circumferential structural second strands providing for functional characteristics for said vascular tubular member with expansion force to hold the tubular member in a larger diameter within the blood vessel, said second strands and making up an equal portion of the inner and outer surfaces of the tubular member,

C. said circumferential structural second strands being interwoven with said first in an alternating manner over and under each consecutive flexible strands having axial compency, said circumferential structural second strands and said flexible first strands having substantially continuous contact with neighboring strands such that said composite wall structure will not significantly leak blood serum or blood cellular elements,

D. said composite wall structure adapted to allow axial structural strands to extend with axial compency and be interwoven with said circumferential structural strands, wherein said composite wall structure will not leak blood cellular elements.

68. (currently amended) The composite wall structure of claim 65 wherein said vascular tubular member is deliverable with a smaller diameter to the blood vessel and adapted to expand expandable to a larger diameter within the blood vessel, wherein said circumferential structural strands exert a force to hold said tubular member out against the vessel wall.

69. (previously presented) The composite wall structure of claim 65 wherein said vascular tubular member is a bifurcated tubular member.

70. (previously presented) The composite wall structure of claim 65 wherein said flexible strands are multifilament strands.

71. (previously presented) The composite wall structure of claim 70 wherein said multifilament strands are formed from a polymeric material.

72. (previously presented) The composite wall structure of claim of claim 70 wherein said multifilament flexible strands are formed from a material taken from a group which includes polytetrafluoroethylene, polyester, silicone, carbon, polyurethane, and composite materials.

73. (previously presented) The composite wall structure of claim 70 wherein said multifilament strands are formed from expanded polytetrafluoroethylene.

74. (previously presented) The composite wall structure of claim 65 wherein said structural strands are monofilament strands.

75. (previously presented) The composite wall structure of claim 74 wherein said monofilament strands are formed from a metal.

76. (previously presented) The composite wall structure of claim 74 wherein said monofilament strands are formed from a material taken from a group which includes stainless steel, nitinol, titanium, tantalum, platinum, metal alloys, and metal composites.

77. (previously presented) The composite wall structure of claim 74 wherein said monofilament strands are formed from a material which is polymeric.

78. (previously presented) The composite wall structure of claim 74 wherein said monofilament strands are formed from a material taken from a group which includes polytetrafluoroethylene, carbon, polyester, polyurethane, and polymeric composite materials.

79. (previously presented) The composite wall structure of claim 65 wherein said structural strands are multifilament strands.

80. (previously presented) The composite wall structure of claim 79 wherein said multifilament strands are formed from strands taken from a group which includes metallic strands, polymeric strands, carbon strands, composite strands, a mixture of metallic and polymeric strands, and composite strands formed from a mixture of metallic and polymeric fibers.

81. (previously presented) The composite wall structure of claim 79 wherein said multifilament strands are polytetrafluoroethylene strands.

82. (previously presented) The composite wall structure of claim 81 wherein said polytetrafluoroethylene strands are formed from expanded polytetrafluoroethylene.

83. (previously presented) The composite wall structure of claim 65 wherein said flexible strands are monofilament strands.

84. (previously presented) The composite wall structure of claim 83 wherein said monofilament strands are formed of a material taken from a group which includes metals, metal alloys, polymers, composite materials, and carbon.

85. (previously presented) The composite wall structure of claim 83 wherein said monofilament strands are polytetrafluoroethylene strands.

86. (previously presented) The composite wall structure of claim 85 wherein said polytetrafluoroethylene strands are formed of expanded polytetrafluoroethylene.

87. (previously presented) The composite wall structure of claim 65 wherein said composite wall structure is a braided structure wherein said structural strands extend with both circumferential and axial compency.

88. (canceled)

89. (currently amended) The composite wall structure of claim ~~66~~ 65 further comprising axial structural strands which are of greater physical stiffness than said flexible strands and having significant axial compency interwoven with said circumferential structural stands in at least a portion of said vascular tubular member, wherein said composite structure will not leak blood cellular elements.

90. (previously presented) The composite wall structure of claim 89 wherein at least a fractional number of said axial structural strands extend proximally beyond an inlet end of said vascular tubular member.

91. (previously presented) The composite wall structure of claim 90 wherein said axial structural strands extending proximally beyond an inlet end of said vascular tubular member are attached to an attachment means that is positioned at a distance away and proximal said inlet end, said vascular tubular member being attached to the blood vessel remote from said inlet end.